

APRIL/MAY 2024

**CBC62 — BIOTECHNOLOGY**

Time : Three hours

Maximum : 75 marks



**SECTION A — (10 × 2 = 20 marks)**

Answer ALL questions.

1. List out the features of DNA ligase.
2. Illustrate structure of pBR322
3. Define Nucleic Acid Hybridization.
4. Compare radio-active and non-radioactive labelling
5. Define principle of electroporation.
6. Summarize the applications of gene transfer.
7. List out the different types of plant growth promoting microbes?
8. Outline the significance of microinjection in plants.



9. Define DNA amplification.

10. Summarize the application of PCR.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Organize the significance of any three DNA modifying enzymes.

Or

(b) Categorize the importance of Yeast artificial chromosome.

12. (a) How will you insertion of recombinant DNA into vector?

Or

(b) List out the types of immunochemical methods.

13. (a) Organize the Importance of Tissue Culture in medicine.

Or

(b) What is the process and application of in vitro fertilization in animals?

14. (a) Organize the various plant hormones based on its functions.

Or

(b) List out steps in antisense RNA technology.

15. (a) How will you Isolate and purify the DNA?

Or

(b) List out types of PCR.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain in detail about different types of Restriction endonuclease.

17. Explain various types of non-radioactive labelling.

18. Explain the methods of gene transfer techniques.

19. Discuss the steps in transgenic plant production.

20. Elaborate on the principle and procedure involved in western blotting.